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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,102	06/20/2003	Kenneth J. Balkus JR.	064422-5007	7030
9629	7590	12/01/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			GRAY, JILL M	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/601,102

Applicant(s)

BALKUS ET AL.

Examiner

Jill M. Gray

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9,31,32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9,31,32 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-7, 9, 31-32, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin, 4,127,706 or Martin et al, 4,043,331 (both referred to collectively as Martin, and both for reasons of record).

Martin teaches electrospun fibers and fibers network produced from a conducting solution comprising a precursor material and surfactant, per claims 1-2, 6-7, and 31-32. The precursor material comprises mesoporous material of the type contemplated by applicants in claims 4, 9 and 34. See '706 column 7, lines 6-10 and '331 column 8, lines 48-52. Also, the fibers have a diameter within applicant's range as set forth in claim 5. See '706, column 3, lines 26-27 and Example 11 and '331, see Example 1 and 3.

Therefore, the teachings of Martin '331 and '706 anticipated the invention as claimed in present claims 1-2, 4-7, 9, 31-32, and 34.

Art Unit: 1774

Claims 1-2, 5-7, 31-32, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Simpson et al US 2004/0037813 A1 (Simpson) or Layman et al, US 2003/0215624A1 (Layman) for reasons of record.

Claims 1, 4-6, 9, 31, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Senecal et al 6,800,155 B2 (Senecal), for reasons of record.

Senecal teaches an electrospun fiber and a network of fibers (claims 1, 6, and 31) comprising at least one mesoporous precursor material of the type contemplated by applicants in claims 4, 9 and 34. See abstract and column 5, line 46 through column 6, line 2. In addition the fibers have a diameter within applicant's range as required by claim 5. See column 4, lines 50-51.

Therefore, the prior art teachings of Senecal anticipate the invention as claimed in present claims 1, 4-6, 9, 31 and 34.

Claims 1-2, 5-7, and 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Ignatious et al, US 2003/0017208 A1 (Ignatious), for reasons of record.

Ignatious teaches electrospun fibers and network of fibers (per claims 1, 6, 31) comprising a fiber forming material and surfactant wherein the surfactant is of the type contemplated by applicants in claims 2, 7, and 32. The fiber forming material is selected from materials capable of being used to form molecular sieves, and more specifically, mesoporous materials. Note [0054], [0055 and [0058]. Also, the fiber diameter is within applicants' range as required by claim 5. See [0031].

Therefore the teachings of Ignatious anticipated the invention as claimed in present claims 1-2, 5-7 and 31-32.

***Response to Arguments***

1. Applicant's arguments filed September 23, 2005 have been fully considered but they are not persuasive.

Applicants argue that none of the references either individually nor in combination teach or suggest the synthesis of a fiber by electrospinning where the fiber comprises a mesoporous molecular sieve; hence, the claims as amended are not anticipated or rendered obvious by the cited references.

In this regard, the language of "produced by electrospinning" in claim 1 is a process limitation, which adds no patentable weight to a product claim. Furthermore, each of the cited prior art references teaches electrospun fibers, or more specifically, fibers synthesized by electrospinning. As to the molecular sieve, the prior art teaches the incorporation of the same type of mesoporous material contemplated by applicants. Accordingly, it is the examiner's position that each of the cited prior art references teaches a mesoporous sieve as well.

No claims are allowed.

***Conclusion***

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

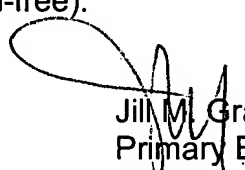
Art Unit: 1774

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jill M. Gray  
Primary Examiner  
Art Unit 1774

jmg